Comments on the Addendum for the North Bala Falls Small Hydro Project

Technical Report

SaveTheBalaFalls.com
June 29, 2012

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Drawings

1 Introduction

On behalf of SaveTheBalaFalls.com, we submit these comments on the Addendum for the proposed north Bala small hydro project.

Please address any questions or responses to this document through:

Mitchell Shnier
25 Lower Links Road
Toronto, ON M2P 1H5

416 222-1430
Mitchell_Shnier@ieee.org

1.1 Summary

While we had many concerns – which remain unanswered – for the proponent's Option 2 proposal, this New Proposal from the proponent provides far less information, yet has many more negative and unmitigated environmental impacts. These include serious (that is, loss of life and property serious) public safety concerns, as well as those of fish habitat, and economic impact. For example:

- The proponent's own words in Section 1.5.1.1 of their Environmental Screening report note the public safety issues for those at the falls for their previous Option 1 proposal, and now their New Proposal locates the tailrace even closer to the falls and angles the flow substantially more towards them. Yet the Addendum offers no explanation of how this worse situation could now be an acceptable public safety risk.
- Figure 2.1 is the only diagram or drawing which shows the actual site and orientation of the proposed facility, but it is not credible as there is no detail showing that such a design could or would actually be built. Indeed, the last pages of the Appendices show a completely different design (two horizontal turbines rather than one vertical turbine). And the artist's rendering in Figure 6.3 is not credible because it shows ventilation louvers on the front which would be blocked by the tailrace gates.
- The proponent offers only hopeful speculation and conjecture rather than scientific fact for the effects of cycling on fish mortality.
- This is the first time the proponent has provided the public with a drawing showing that the tailrace flow would be so close and angled towards the base of the north falls and the docks on the Moon River. There are major implications of this, yet there has been no public consultation on this New Proposal.

Obviously, an Addendum is inappropriate for this New Proposal. We therefore request that an Environmental Review Report be provided, and this work begin with a public information centre so that the public has an opportunity to learn of the proponent's New Proposal directly from the proponent and so that there is public consultation as specified by Section A.6.2.1 of the *Guide to Environmental Assessment Requirements for Electricity Projects*.

We also note that 29 days into the 30-day public comment period, the proponent changed the posted version of the Addendum from Revision 2 to Revision 3 and did not provide notice of this, nor any detail of the changes made.

2 Detailed Response

In an Addendum dated May 25, 2012, the proponent for the proposed hydro-electric generating station at the Bala Falls provides some information on a New Proposal which they refer to as Alternative 1D. Where this Addendum is silent, reference will be made to the proponent's Environmental Screening Report (ESR) dated October 2009.

Below we present unaddressed or inadequately mitigated negative environmental impacts of this New Proposal.

2.1 Public Safety

Compared to anything previously presented to the public, this New Proposal is even closer to the in-water recreational areas downstream, as a result there are many public safety concerns.

2.1.1 Tailrace Flow Direction and Location

1) The location of the tailrace and the direction of water exiting it would be substantially different for the proponent's New Proposal as compared with their previous proposals, as detailed below:
   a) As shown in Drawing 1 and Drawing 2, compared to the proponent's original Option 1 proposal, the New Proposal would be:
      - More than 60' closer to base of north falls
      - Angled 45° closer towards north falls
   b) As shown in Drawing 3, compared to the Option 2 proposal, the New Proposal would be:
      - 90' closer to base of north falls
      - Angled 20° closer towards north falls

   The end result is that the tailrace flow would be directed towards and past both the town docks on the Moon River and the private docks on the north side of the Moon River between the north falls and the town docks on the Moon River. This would:
   a) Have a negative effect on marine navigation near and at these docks.
   b) Impinge on the riparian rights of the owners of the private docks on the north shore of the Moon River between the north Bala Falls and the town docks on the Moon River.

      Note that the town docks on the Moon River are:
      - For use by any member of the public.
      - The only public docks on the Moon River, so are the only way to launch boats into the Moon River.
      - The only access available for people whose residences are on islands in the Moon River.

      Therefore, affecting the marine navigation at the town docks on the Moon River would have major consequences.
   c) Be a public safety concern for in-water recreation at the base of the North Falls.

2) The proponent's flow simulations in the last few pages of the Appendices of the Addendum show that a gyre would be created. This whirlpool is a further threat to both the very popular in-water recreation at the base of the north falls, as well as marine navigation.

3) This flow simulation needs to show:
   a) The impact on marine navigation for both users of the town docks on the Moon River and for the private docks on the north side of the Moon River between the north Bala Falls and the town docks on the Moon River.
   b) The impact on in-water recreation at the base of the north falls.
   c) The impact on marine navigation elsewhere on the Moon River, such as for those attempting to launch canoes into the Moon River from the Township property on the south side of the proposed powerhouse.
   d) The full extent of the gyre created, and the locations of it under various flow conditions; of the flow over the north falls, through the proposed powerhouse, and of the flow through the south channel.

   This flow simulation needs to be provided for several conditions, including when the proposed generating station is running at full capacity, both with and without the additional 9.5 m^3/s flow over the north falls as is required during the Walleye spawning period in the spring.

To Report 1: The tailrace flow simulation needs to be extended and shown for various flow conditions of the north falls, through the proposed powerhouse, and of the flow through the south channel.

2.1.2 ESR Section 1.5.1.1

In ESR Section 1.5.1.1, the proponent presents their *"original design … proposed as part of the site release program …"* – that is Option 1. It refers to "Drawing 327078-SK-101", which is on the second page of the ESR Appendix A, and part of this is shown in Drawing 1. Concerning Option 1, ESR Section 1.5.1.1 includes the following text:

"The tailrace of the powerhouse would be located in close proximity to the falls which could cause safety issues and public concern. Furthermore, the location of the intake would be between the North Bala Dam and the highway bridge. This is not an optimum location from a hydraulic standpoint and head losses would be incurred. Approach area excavations near and below the road bridge to improve the hydraulics would be difficult and could threaten the bridge or dam.

From the above quoted text we note:

1) For Option 1 the proponent noted *"safety issues and public concern"*, yet their New Proposal would be even closer to and more angled towards the north falls (as shown in Drawing 1 and Drawing 2).

To Report 2: How both the safety issues the proponent noted in their ESR, and the greater safety issues due to the tailrace being closer to the north falls and angled towards them, would be addressed.

2) For Option 1 the proponent noted intake excavations *"could threaten the highway bridge or dam"*, yet not only is this what they are currently proposing (as shown in

Figure 2.1, the intake would be directly adjacent to the north dam and require blasting and excavating between the two highway support piers), but the proponent presents another design drawing (in the flow simulations in the last pages of the Appendices) which would actually require removing the south sluice of the north dam and would actually surround the south support pier of the highway bridge.

The New Proposal presents significant risk to public infrastructure and even the possibility of loss of life, yet the proponent offers no information on how the public's interest would be protected.

To Report 3: How the intake excavations would be done without damage to the north dam or highway bridge, and how risk to both public infrastructure and the public would be addressed.

2.1.3 Water Intake and Upstream Concerns

Section 6.2.5 states that the docks at Purk's Place could continue to be used, yet the speed of the water at these docks at various flow conditions or possible intake conditions is not presented, for example:

1) While one configuration of the proposed intake is shown in Figure 2.1, another intake configuration is shown in the Figures at the end of the Appendices (these are titled "Flow Velocity Field, Post Conditions").

   Information is needed on how each of these intake design options would affect the flow velocity at and near the Purk's Place docks for various flow conditions, including when the plant is running at capacity and the additional 9.5 m^3/s flow is required over the north falls for Walleye spawning.

2) In ESR Section 2.2.5.5 the proponent notes that canoes may be rented at Purk's Place. In ESR Section 2.2.5.7 the proponent notes that skiffs are used upstream for the annual Bala Regatta. In ESR Section 6.3.6.1 the proponent notes that kayaking is also common.

   Information is needed on what the maximum acceptable flow velocities are for safe marine navigation; for each of these types of watercraft, for operators of these watercraft who are children or are similarly less inexperienced.

3) Figure 2.1 shows the Purk's Place docks would be only 25 m from intake channel and would be within a few metres of the upstream safety boom. Given that people may not be immediately familiar with boats they rent at Purk's Place, there needs be information concerning the dangers of having the intake in such close proximity to these docks.

To Report 4: The water speed at the upstream safety boom and Purk's Place docks under various flow conditions, and the maximum water speeds for safe marine navigation for various watercraft.

2.1.4 Intake Excavation

As noted above, the proponent presents two possible designs (Figure 2.1 and in the last pages of the Appendices), each with different intake excavations required. For each design, there are several concerns:

1) The intake channel would need to be blasted into the bedrock below the north channel, either between the support piers for the highway bridge, or surrounding the south support pier for the highway bridge.

2) The intake would need to be blasted into the bedrock below the north channel either directly adjacent to the south sluice of the north dam, or replacing the south sluice of the north dam.

In all cases, the highway bridge over the north channel could be damaged, as could the north dam.

1) If the highway bridge was damaged and could not be used during inspection or repairs, all pedestrians and vehicles would need to detour 50 kilometres! This would have major impacts on emergency vehicle response times, traffic congestion, and the local economy.

2) If the north dam was damaged, there could be significant property damage and loss of life due to the 20'-high wall of water which would flood the residences down the Moon River.

To Report 5: Details of how the intake excavation could be done safely.

To Report 6: A dam risk assessment, given the intake excavation required.

2.1.5 Powerhouse Excavation

Informal sketches previously provided by the proponent show the excavation for the proposed powerhouse would be 70' below the level of District Road 169.

Given this would require blasting into bedrock, the public needs to know the steps to be taken (such as shoring and underpinning) to ensure the road and the Township land to the south, would remain safe and accessible by the public throughout the construction period.

To Report 7: An assessment of risks to District Road 169 and the Township land to the south of the proposed site.

2.1.6 Upstream Cofferdam

As shown in Figure 5.1, compared to Option 2, during construction significantly more of the north channel would need to be obstructed by the upstream cofferdam.

We have carefully analyzed the profile of the bottom of the north channel, both east and west of the highway bridge and find that while the upstream cofferdam for this New Proposal would be in place, 85% of the water flow through the north channel would be blocked, as compared to only 40% blockage for the previously-proposed Option 2. Furthermore:

1) During construction, this blockage would need to be in place for a greater period of time (as there is no “rock plug” as described in ESR Section 5).

2) This upstream cofferdam could not be removed quickly if there was a high flow event, as the excavations at the north dam or highway pier may not be ready for the force of water.

3) Given that more of the north channel needs to be blocked, for a greater duration of time, and that the cofferdam may not be able to be removed quickly, and given that the north channel is sometimes needed in addition to the full capacity of the south channel to handle high flow events, the construction of the New Proposal would present a risk of flooding Bala Bay and indeed all of Lake Muskoka. This could create major property losses.

To Report 8: How the risk of flooding Lake Muskoka would be assessed and addressed.

2.1.7 Downstream Safety Boom

Figure 2.1 shows the downstream safety boom.

1) This downstream safety boom would be less than 5' from the publically-accessible land and shoreline to the south.

2) The tailrace flow simulations in the last pages of the Appendices show that high-velocity water would extend beyond the downstream safety boom.

To Report 9: The water velocities adjacent to and beyond the downstream safety boom when under various flow conditions including when the proposed generating station is operating at maximum capacity.

To Report 10: An analysis of whether any areas outside of the proposed downstream safety boom would be unsafe for the in-water recreational activities and the marine navigation for the various types of watercraft used in the area.

2.2 Proposed Structure

2.2.1 Internal details

The proponent has either not provided information, or there is inadequate detail so the information is not credible, for example:

1) The proponent has provided conflicting information on whether the electrical equipment (such as the step-up transformer) would be in the proposed powerhouse, or on the roof.
   a) For example, Section 2.1.2 states the electrical equipment would be within the proposed powerhouse, but ESR Section 1.5.1.1 states it may be on the roof (and indeed, we note that the recent rebuilding of both the Bracebridge Falls and Wilson's Falls generating stations relocated the electrical equipment to be outdoors).

      Locating electrical equipment outdoors is required due to installation, servicing, and cooling requirements and the proposed generating station would have almost double the capacity as these other generating stations.
   b) We also note that while Section 2.1.2 states that dry-type transformers would be used, for the recent rebuilding of both the Bracebridge Falls and Wilson's Falls generating stations dry-type transformers were not used.

This information is important as it affects the noise calculations, ventilation requirements, the appearance of this very visible structure, and whether there would be a publically-accessible roof-top lookout.

2) The proponent has only provided an artist's rendering (Figure 6.3), which has no dimensions or scale, no property line, and omits all detail of whether such a structure could actually be built.

   As was provided in ESR Figure 5.1, detail of the internal design of the proposed powerhouse needs to be provided so the public can understand the appearance, such as the locations of the vehicle driveway, personnel entrance door, emergency exit and access hatches, hoists, gates, ventilation in-takes, and the back-up diesel generator exhaust.

   Operational details are needed, for example, how would the back-up diesel generator be refuelled (as it would need to be regularly run for testing). How would the north side of the structure be accessed to clean-up litter or graffiti, and would there need to be an access ladder for this purpose.

   The above additional details are required to know whether the rendering provided in Figure 6.3 is credible. For example, while the front of this rendering apparently shows ventilation louvers, these would be blocked by the tailrace gates so would not actually be functional.

To Report 11: Technical drawings showing site, plan, elevation, and section views of the proposed powerhouse, showing the location of major components and ventilation openings.

2.2.2 Portage

The proponent's Option 2 proposal would have eliminated the traditional portage point on Lake Muskoka, however there are (less desirable) alternatives to this, such as at the town docks and Diver's Point.

However, the proponent's New Proposal would eliminate the traditional portage point on the Moon River and there are no nearby alternatives for this.

Yet in Table 6.1 the proponent describes the impact on the portage as positive.

To Report 12: An explanation of how the impact on the traditional Portage can be positive when the more important portage point on the Moon River would be eliminated.

2.2.3 Riparian Rights

1) The flow simulations presented at the end of the Appendices need to be extended to show whether the tailrace flow would make marine navigation too dangerous to use the town docks on the Moon River and the private docks on the north shore of the Moon River between the north falls and the town docks on the Moon River.

2) People swim from the shoreline south of the proposed tailrace. Also, given that the shoreline south of the proposed tailrace is public property, rather than walking the ½-km to the suggested alternate portage point on the Moon River, people would

attempt to use this shoreline south of the proposed tailrace as a portage point, as is the public's right.

The location of the downstream safety boom needs to be shown on the tailrace flow simulations.

To Report 13: Whether the tailrace flow would affect the riparian rights of adjacent landowners, by preventing safe boating, swimming, and portaging.

2.2.4 Sirens and Strobe Lights

The public needs to know whether audible or visual warning devices (such as sirens and strobe lights) would need to be used in advance of the proposed daily cycling operation which would be required at least throughout the summer. The proponent's statements about *"mitigation to warn upstream users"* is too vague.

To Report 14: Given the danger to upstream and downstream in-water recreation, whether a siren would need to be sounded in advance of cycling.

2.2.5 Noise

1) In the proponent's noise calculations in their ESR they did not include all the noise sources and they neglected to consider that the proposed structure would need many openings for ventilation and other purposes and that these openings would have less noise attenuation than 8"-thick concrete walls regardless of any muffling that may be possible.

To Report 15: The noise calculations in the Addendum need to be repeated including all the noise sources.

2) The proposed structure would be significantly closer to the Points of Reception.

To Report 16: The noise calculations in the Addendum need to be repeated using the correct distances to the Points of Reception.

2.3 Fish habitat

2.3.1 Fish Mortality Calculations

The proponent's fish mortality calculations are incorrect and deficient.

1) In ESR Section 6.2.5.6 a fish mortality equation is presented:
   a) In Section 6.2.1.4 the net head used is 5.3 m, but this should be 6.2 m as provided in Section 2.1 and ESR Section 1.2.
   b) The calculation assumes a single turbine, but should include two turbines as may be implemented as stated in Section 2.1, Section 2.1.2, Table 2.1, and shown in the drawings on the last pages of the Appendices.

   For example, for 500 mm fish, and using the formula provided by the proponent:
   a) With a 3.75 m diameter turbine, and a 6.2 m head results in a fish mortality of 11.6% (an increase of 14%).

b) As above, but with two turbines (each with half the cross-sectional area) the fish mortality would be over 35% – an increase of 250%.

To Report 17: The fish mortality calculation results using the correct net head and two turbines.

2) The proponent notes that their New Proposal would use a smaller turbine diameter, these typically have a higher rotational speed and as noted in ESR Figure 6.4, this would result in a higher fish mortality. In fact most of the results presented in ESR Table 6.5 are already not valid for even the proposed Option 2 turbine rotational speed.

   Also, the proponent ignores the effect of lower temperatures causing fish to move more slowly, so they would not be able to escape entrainment.

To Report 18: Science-based information on the effect of other factors on fish mortality.

2.3.2 Fish Mortality Estimation Methods

There is much literature on fish mortality, for example:

1) Tailrace design to reduce fish impact (and therefore mortality through injury).

   For example, the compensation areas shown in Figure 5.2 could actually harm dazed fish having trouble swimming in the turbulent water exiting the tailrace by forcefully directing them towards rocks.

2) The effectiveness of deterrents to fish entrainment (for example, that infrasound is ineffective for intake channel geometries such as that of the north channel).

Yet the proponent does not appear to have consulted or utilized this information.

To Report 19: Science-based fact for methods to reduce fish mortality.

2.3.3 Cycling Operation

Concerning the proposed cycling operation:

1) The proponent only offers speculation concerning:
   a) The increase in fish mortality.
   b) Whether slowly ramping-up the speed of the turbine(s) would be beneficial.
   c) The effect on benthic production.
   d) Whether infrasound generators are known to be beneficial in this type of situation (literature claims they would not, due to the intake channel geometry and that fish are resident rather than migratory, so would become habituated to the infrasound).

   Scientific fact and studies must be provided, not wishful thinking and conjecture.

To Report 20: Scientific study of the impact of cycling on fish habitat.

2) The proponent's estimate of cycling only causing a 2 cm change in the water level of Bala Bay is based on a simple mathematical calculation using all of Lake

Muskoka as head pond. And they assume that the effect of wind would negate this. However:

a) Environmental assessment requires consideration of cumulative effects – for example, the wind is equally likely to increase the height variation.

b) The proponent has not considered the constriction due to the three narrow channels that connect Bala Bay to Lake Muskoka. These would amplify the water level variations in Bala Bay and affect marine navigation through these channels.

To Report 21: Proper simulation of the impacts of cycling on the water level of Bala Bay.

3) The proponent has not adequately and scientifically considered the loss of fish habitat and the acceptable compensation areas due to the cycling operation.

To Report 22: Scientific study of the impact on fish habitat due to cycling operation.

4) Would the cycling operation increase methyl mercury presence in the fish habitat, for example, due to increased disturbance of bottom sediment.

To Report 23: Scientific study of whether cycling would increase levels of methyl mercury in the fish habitat.

2.3.4 Tailrace Location and Flow Direction

As shown in Drawing 3, the New Proposal would have a different tailrace location and flow direction from that previously proposed.

The resulting different harmful alteration, disruption, or destruction of fish habitat has not been evaluated.

To Report 24: Scientific study of the impact on fish habitat of the different tailrace location and flow direction.

2.4 Construction Disruption

2.4.1 Settling Tank

During construction, water would infiltrate into the excavation through fractures in the rock. Such water pumped out would need to be treated in a settling pond or settling tank.

As the adjacent Township land would likely need to remain safe and accessible for public use throughout the construction period, where would this settling tank be located.

To Report 25: Where would the settling tank be located.

2.4.2 Construction Materials Staging

1) Figure 2.1 shows the Portage Landing parking lot as Crown land and Section 5.2.2 states this may be used for construction staging. However, this was never Crown

land, and has now been purchased by the Township of Muskoka Lakes to improve the availability of parking in the area. Therefore this area would not be available for construction staging.

2) Section 5.2.2 states that the Precambrian Shield parking lot may be used for construction staging. However, the Farmer's Market has now returned to using the Precambrian Shield parking lot. Therefore if this area was used for construction staging, the economic impact would need to be assessed.

3) Section 5.2.2 states that Margaret Burgess park may be used for construction staging.
   a) This area is very important for tourism and also is heavily treed and damage to these trees would have a long-term impact on the area's tourist draw.
   b) Road access to Margaret Burgess park would need to be through the District road allowance and parking area to the east. Loss of this parking area would have an impact on the area's tourist draw.

To Report 26: A realistic construction materials staging plan, based on what lands would actually be available, so that the construction impact can be understood.

4) ESR Figure 5.1 provided some information on the construction steps so the public may understand the construction disruption and impact.

   While the construction stages would be completely different for the proponent's New Proposal, no such updated information has been provided. The public needs to know:
   a) Where a construction crane would be located.
   b) Where would a construction barge be located.
   c) Where dump trucks would queue, be loaded, and turn-around. It would be dangerous to have passing vehicular traffic adjacent to dump trucks being loaded with blasted rock.
   d) From where would concrete be mixed and pumped.
   e) What permanent impacts would there be from the temporary bridge over the north falls (anchor bolts, poured concrete foundations, and so on). Maintaining the natural beauty of this area is important.
   f) Would the public continue to have full and safe access to the Township property south of the proposed construction site throughout the construction period.
   g) What would the timeline (offset in weeks from start of construction) be, including; when blasting would occur, when cofferdams would be installed, when would Diver's Point need to be used for construction staging, when would a settling tank be installed, when would a temporary bridge over the north falls be required, and so on.

To Report 27: Details of major aspects of proposed construction, along with a construction timeline.

2.5 Land Tenure

Figure 2.1 notes the Precambrian Shield parking lot is Crown land, but we understand some parts of it are not Crown land. We are in the process of obtaining clarifications on this and other land ownership issues, and will provide further information when available.

2.6 Vehicular Traffic Impact

2.6.1 Highway Guardrail and Concrete Separation Barrier

Given that construction vehicles would need to access the site, the section of highway guardrail on District Road 169 fronting the proposed construction site would need to be removed, as shown in Drawing 9.

Also, as dump trucks would need to stop, queue, and be loaded along the west side of District Road 169, there would be need to ensure safety separation between these dump trucks and passing vehicles, both to ensure:

1) Passing vehicles don't crash into the stopped dump trucks.

2) Any blasted rock being loaded into the dump trucks doesn't fall over the side of the truck onto passing vehicles.

For safety, a concrete "Jersey Barrier" would need to be installed along the southbound lane of District Road 169, as shown in Drawing 9. This would also be needed to ensure that cars exiting Bala Falls road are protected from the embankment to the west of District Road 169 and also from the construction site and the 70'-deep excavation in it. This protection is also needed for vehicles travelling along District Road 169.

This barrier and the need for trucks to be queued so close to the highway bridge would leave only a single traffic lane to be shared for both directions of traffic on District Road 169. This would create traffic congestion and delay. For safety, a traffic signal light would need to be installed.

To Report 28: Would District Road 169 be restricted to a single lane, for what duration of time, what traffic congestion would there be.

2.6.2 Blasting

As there would need to be blasting and excavation directly adjacent to the support piers for the highway bridge, traffic over the bridge would need to be halted both during the actual blasting, and until inspections are complete to ensure that the bridge and its supports have not been damaged.

To Report 29: What traffic disruption would occur due to blasting and the subsequent inspections, for how many months would this occur.

2.6.3 Truck Turning

Dump trucks would need to turn around and merge back onto District Road 169. Where would this occur, as it would create traffic disruption.

To Report 30: What traffic disruption would occur due to truck turning.

2.6.4 Speed Limit

The speed limit of District Road 169 would need to be reduced to protect both passing vehicles and construction workers, as this construction would be directly adjacent to, and below, District Road 169.

To Report 31: What traffic disruption would occur due to the reduced speed limit.

2.6.5 Traffic Queuing and Delay Study

As described above, the construction would create traffic congestion and delay. As the detour around this proposed construction site is 50 km, few vehicles could avoid this.

Therefore, for all of the above causes of traffic disruption, a traffic queuing and delay study must be provided as this would impact the local economy (delaying deliveries), emergency vehicles, and the general population.

To Report 32: A traffic queuing and delay study that details each stage of construction and the causes of traffic disruption during each, and includes existing historical traffic load at different times of the year.

2.6.6 Driveway

During operation, the proponent's New Proposal would require a driveway for service vehicle access and this driveway would need to access District Road 169. As shown in Drawing 7, the Crown land's frontage to District Road 169 is approximately 12.8 m wide (42') and even if the driveway was located at the south property boundary:

1) The concrete end of the highway bridge railing would obstruct the view of southbound drivers to see vehicles attempting to exit this driveway.

2) The concrete end of the highway bridge railing would obstruct the view of drivers exiting this driveway to see southbound vehicles approaching from the north (as shown in Drawing 8).

   Also, since the driveway for the New Proposal would not have sufficient space for service vehicles to turn around, such service vehicles would need to back-up (that is, drive in reverse) onto District Road 169, making this driveway even more dangerous for all.

To Report 33: How service vehicles could safely exit the New Proposal's driveway.

2.7 Process

2.7.1 This Addendum is Inappropriate

Section 2.1 of the proponent's Addendum states ...

"The ES/RR investigated several alternative locations for the Project, including, but not limited to ... the original Alternative 1 location that would be located entirely on Crown

lands. Note that this was the original project layout provided to MNR in 2005 for its Waterpower Site Release Program and presented at the first Public Information Centre in August 2007."

The proponent's statement is not true. The actual drawings presented in the proponent's original 2005 proposal, at their 2007 public information centre, and in the proponent's 2009 environmental screening report as the "original design" are reproduced as Drawing 4, Drawing 5, and Drawing 6.

As can be clearly seen from the added property boundary lines in these three drawings, municipal land was needed for all of the following:

1) The driveway.

2) The retaining wall.

3) A substantial portion of the powerhouse.

To be clear, the proponent has never before this Addendum was released on May 30, 2012 presented to the public a proposal which could be built "entirely on Crown lands".

And in all these drawings all the information presented to the public showed the dangerously turbulent water exiting the tailrace as angled substantially away from the base of the north falls and the town docks on the Moon River.

The proponent is therefore presenting a New Proposal, never before seen by the public. This is not *"slightly updated"*, this has completely new public safety issues for which there has never been any public consultation. This New Proposal would;

1) Move and angle the dangerously turbulent water exiting the tailrace towards, and create a treacherous whirlpool at, the base of the north falls.

2) Make marine navigation at the town docks dangerous.

3) Require blasting directly at and around both the north dam and the highway bridge, threatening both the public and their property.

An environmental assessment requires public consultation – even for an Addendum, as noted in Section B.B.2 of the *Guide to Environmental Assessment Requirements for Electricity Projects* which states *"The purpose of the addendum provisions is to require proponents to consider the environmental significance of minor modifications to projects, and to require consultation on changes that are environmentally significant."*

The public has a right to be consulted, and this has not happened for the proponent's New Proposal.

To Report 34: Public Consultation and an Environmental Review Report needs to be provided for this New Proposal.

2.7.2 The Notice of Filing of Addendum Presents Incorrect Information

The proponent's Notice of Filing of Addendum includes the following text:

"An Addendum to the ESRR has been prepared as a result of two key proposed modifications to the Project, as it was originally presented in the ESRR. These

modifications include … A change in the preferred location of the Project to a location discussed in the original ESRR, and …

Again, this is not true. The actual drawings presented in the proponent's original 2005 proposal, at their 2007 public information centre, and in the proponent's 2009 environmental screening report as the "original design" are reproduced as Drawing 4, Drawing 5, and Drawing 6. Clearly the proponent's New Proposal is a project location entirely on Crown land and this was not previously discussed or presented to the public. The difference is significant, as described elsewhere in this report, for example concerning many serious public safety issues.

Providing incorrect information in such a fundamental environmental assessment document misleads the public and is an abuse of the process. The environmental assessment and public consultation requirements will only be fulfilled if the environmental assessment process is restarted, beginning with a public information centre, and requiring an Environmental Review Report.

2.7.3 The Ministry of the Environment Appears to Have Provided Incorrect Information

On February 27, 2012 we sent an e-mail to the project evaluator at the Ministry of the Environment which included the following question:

"4) I understand that the proponent for this proposed project has begun work on an Addendum to their Environmental Screening Report. And a draft version of this Addendum is in the project files of Fisheries and Oceans Canada and available to me. Yet this Addendum has not been in the Ministry of the Environment's Public File. Could you tell me why this draft Addendum has not been in your Public File."

On February 28, 2012 we received the following reply to this question from the Ministry of the Environment:

"- our branch has not yet received any addendums to the Environmental Screening Report. I cannot comment on other regulatory agencies and why they have received supplemental documentation for this Project."

However, Section 1.5 states *"A draft version of this report (Revision 0) was provided to Fisheries and Oceans Canada (DFO) … on September 21, 2011, and to the MOE on October 7, 2011 for initial comments."* And Appendix C notes that on October 27, 2011 there was a meeting with the proponent, their environmental assessment consultant, and the Ministry of the Environment which *"Discussed Addendum Report comments and next steps".*

That is, the proponent reports that the Ministry of the Environment branch apparently did receive an addendum document and even met and provided comments on it.

To Report 35: An explanation how the Ministry of the Environment can consider they did not receive a draft Addendum when they reportedly did.

2.7.4 The Proponent Changed their Addendum With Less Than a Day Remaining in the 30-day Comment Period

With less than a day remaining in the 30-day public comment period, and without any announcement to the public, the proponent changed the posted version of their Addendum from Revision 2 to Revision 3.

The only explanation provided was a note in fine print on their web site as follows:

"{Please note that the version of the Main Report posted here was updated June 28, 2012. Changes to the originally posted one on May 30, 2012 were purely editorial and did not involve any changes to the project description, associated impacts or proposed mitigations.}

This is an 84-page formal document, and this was changed without any change-bars provided or any other way to ascertain what text was actually changed. One might assume that the proponent's explanation that the changes were *"purely editorial"* as meaning that changes were insignificant, such as corrected spelling. But an initial examination shows that text was added at least concerning the cycling operation, which is a fundamental part of the proponent's New Proposal. This is a significant change and the public needs to have the opportunity to consider this in their questions to the proponent and in their comments provided.

This again shows the proponent's continued abuse of this environmental assessment process and lack of respect for public consultation and notification.

To Report 36: A formal notification that the publically-released Addendum was modified, that updated printed versions are provided in the public locations, that the changes made be highlighted, and that the 30-day public comment period be extended.

3 Conclusion

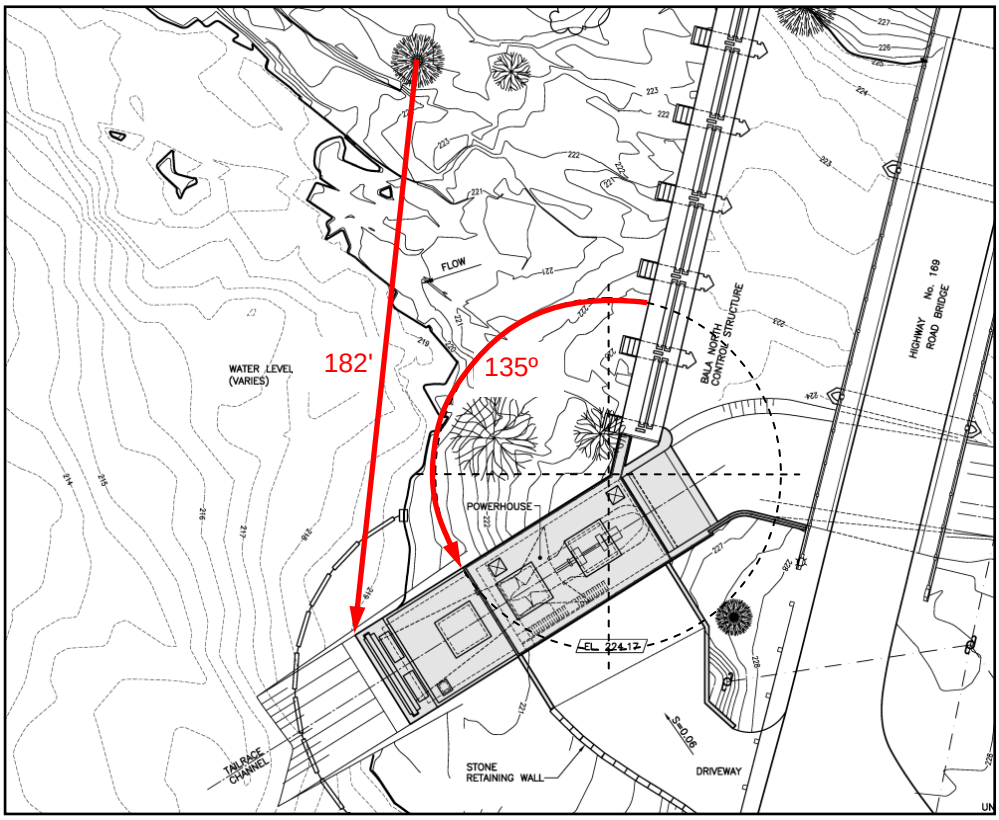
3.1 To Report

While we had many concerns – which remain unanswered – for the proponent's Option 2 proposal, the proponent's New Proposal provides far less information, yet has many more negative and unmitigated environmental impacts, including serious (that is, loss of life and property) public safety issues, as well as fish habitat, economic impact, and process issues.

Below is summary listing of the information which the proponent needs to present.

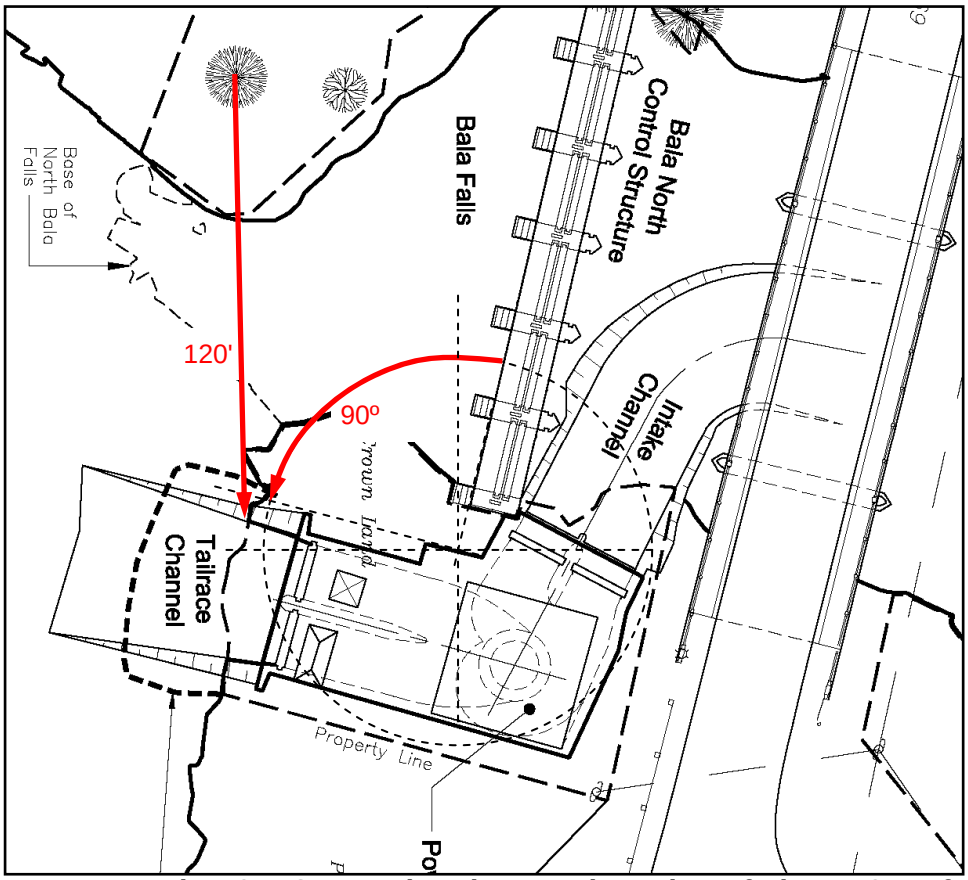
3.2 An Environmental Review Report is Required

Obviously, an Addendum is inappropriate for this New Proposal presented by the proponent. We therefore request that an Environmental Review Report be provided, and this work begin with a public information centre so that the public has an opportunity to learn of the proponent's New Proposal directly from the proponent and so that there is public consultation as specified by Section A.6.2.1 of the *Guide to Environmental Assessment Requirements for Electricity Projects*.



Part of *"Alternative 1 General Arrangement"* from Appendix A of 2009 Environmental Screening Report, therein referred to as the *"original design (Drawing 327078-SK-101 in Appendix A2) was proposed as part of the site release program application"*. Referred to in ESR Section 1.5.1.1.

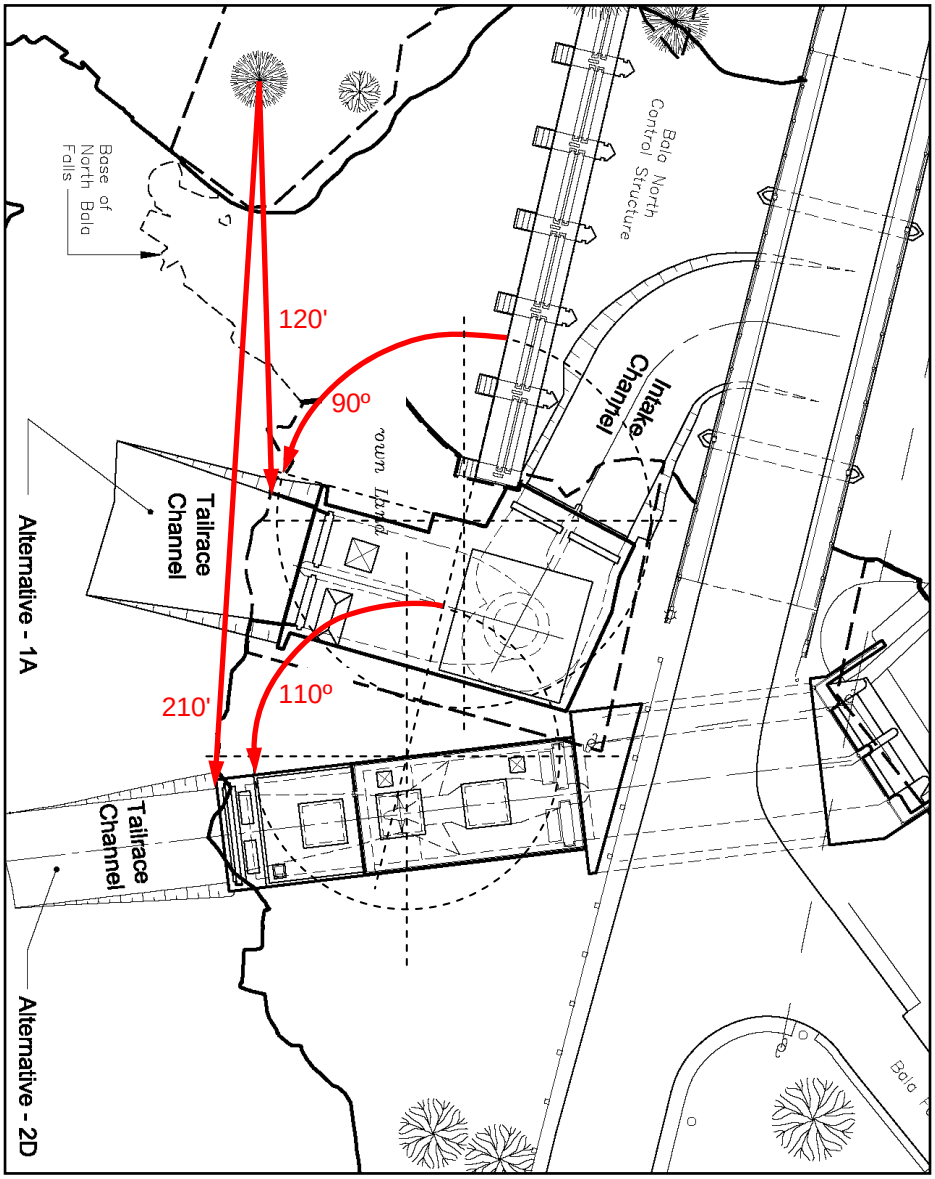
Drawing 1 – Cropped section of Alternative 1, General Arrangement (Option 1), from page 2 of Appendix A of Environmental Screening Report



Compared to Option 1, the water exiting the tailrace for the New Proposal (Alternative 1A) would be:

- More than 60' closer to base of north falls
- Angled 45º closer towards north falls

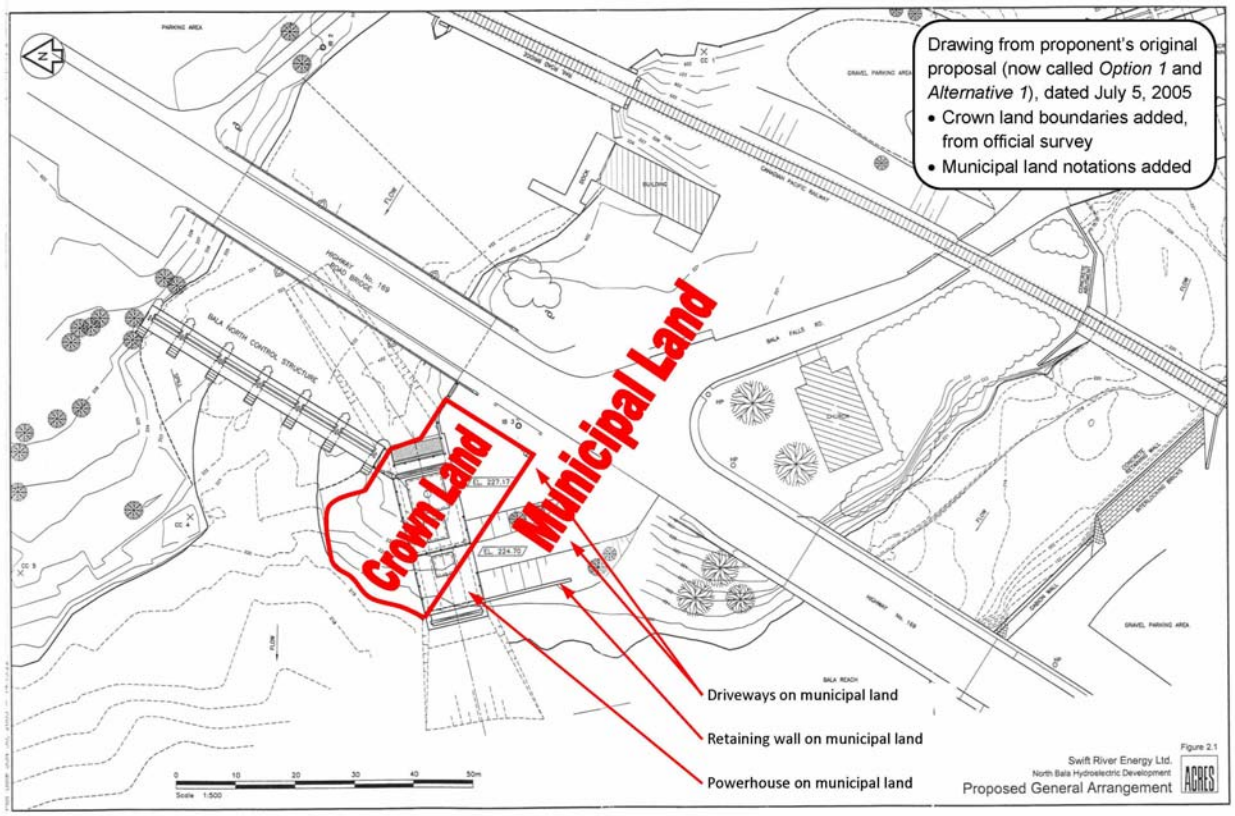
Drawing 2 – Cropped and rotated section of Figure 2.1 of Addendum (New Proposal), shows tailrace substantially closer and angled towards north falls



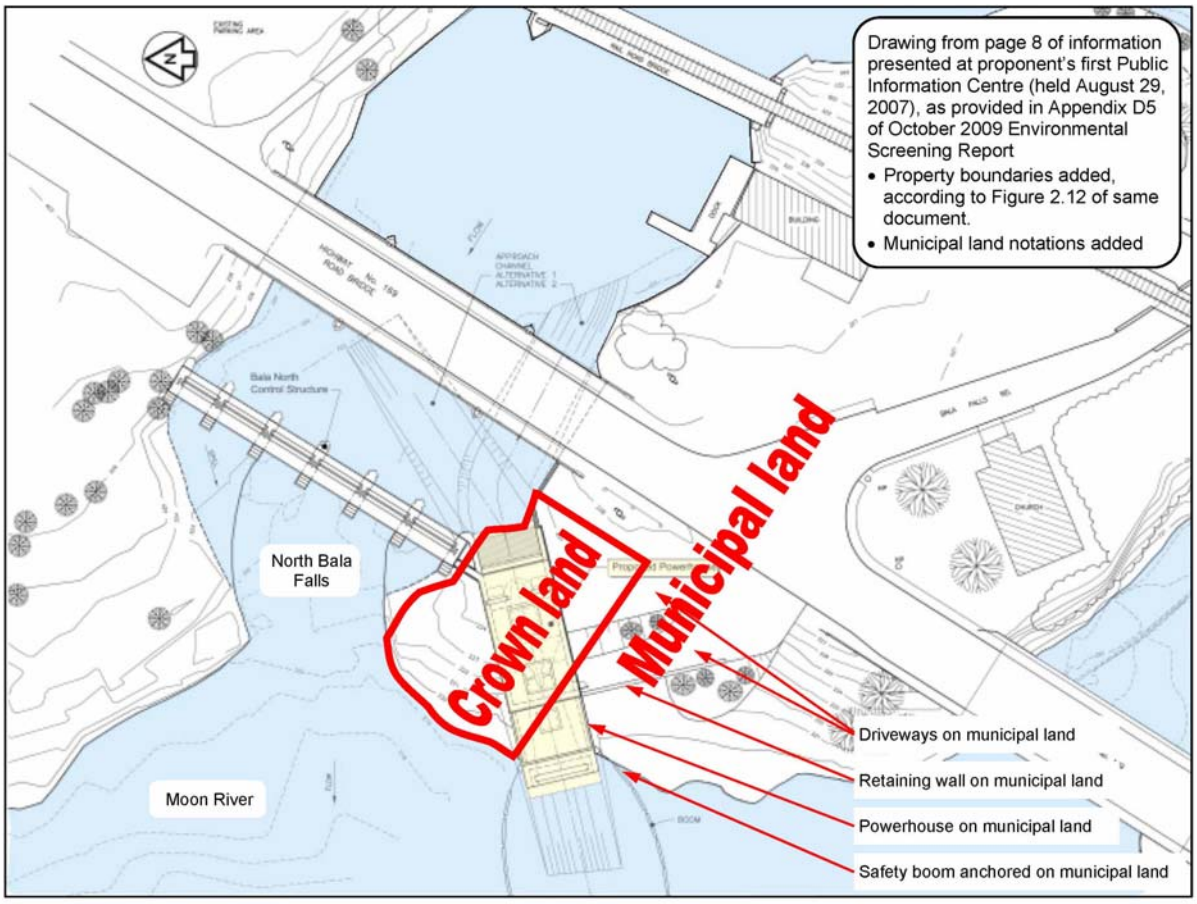
Compared to Option 2, the water exiting the tailrace for the New Proposal (Alternative 1A) would be:

- 90' closer to base of north falls
- Angled 20º closer towards north falls

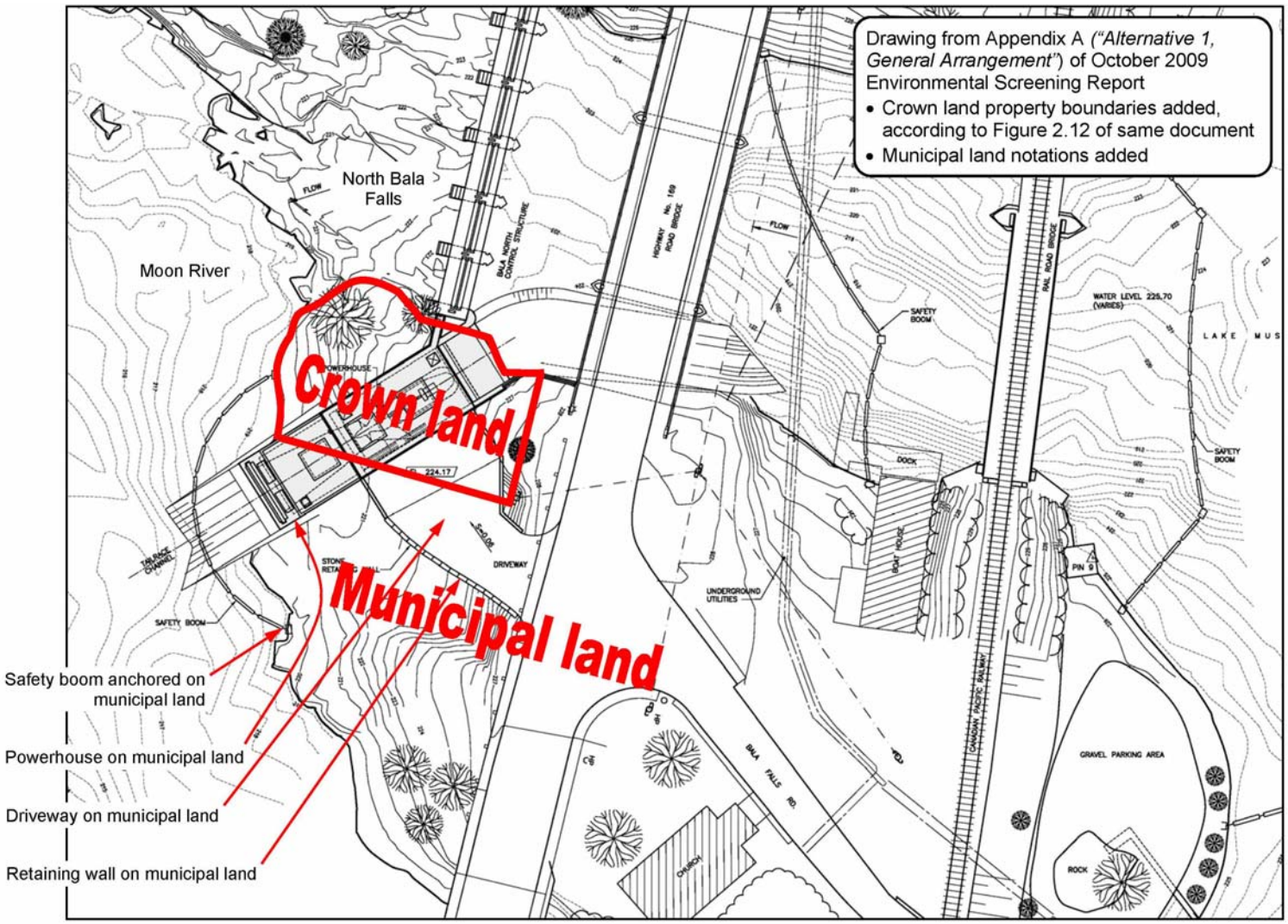
Drawing 3 – Cropped and rotated section of Figure 5.1 of Addendum (New Proposal and Option 2)



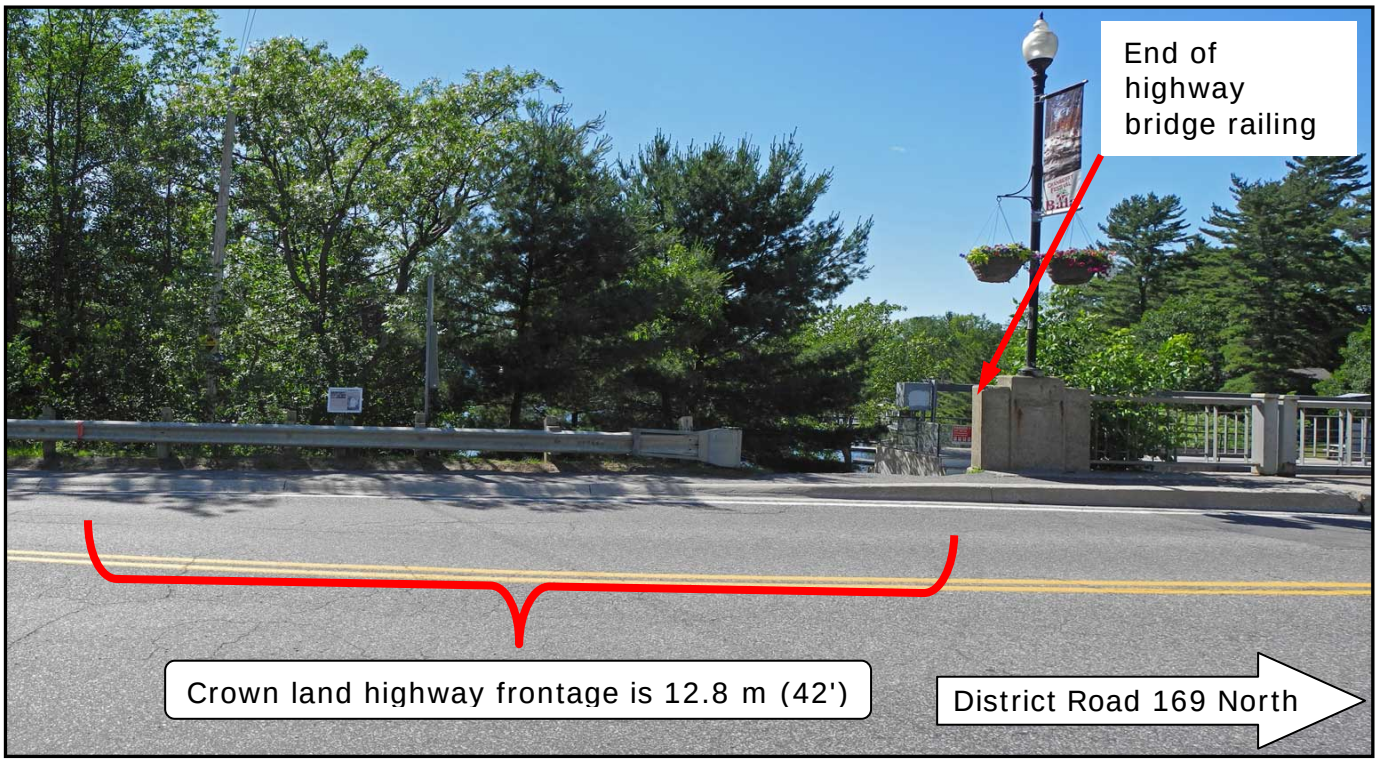
Drawing 4 – From proponent's 2005 proposal, Option 1 would not fit solely on Crown land



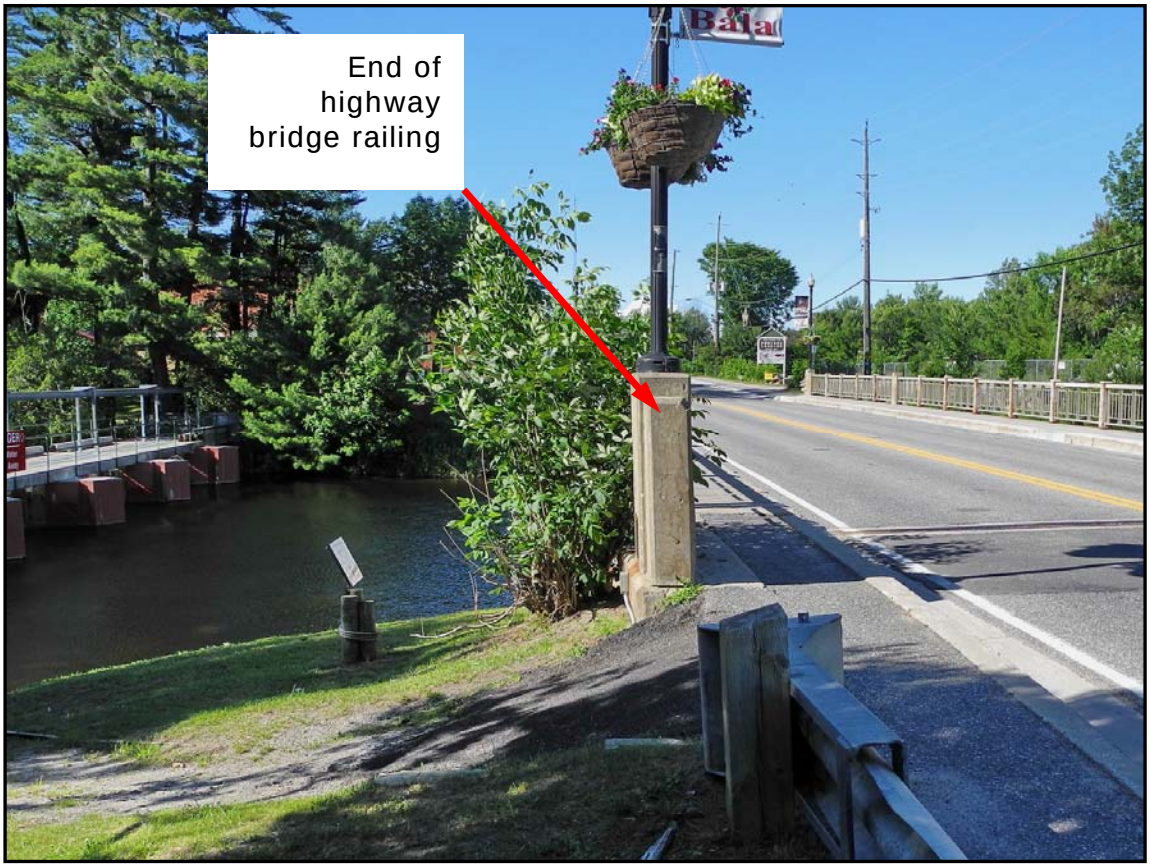
Drawing 5 – From proponent's 2007 Public Information Centre, Option 1 would not fit solely on Crown land



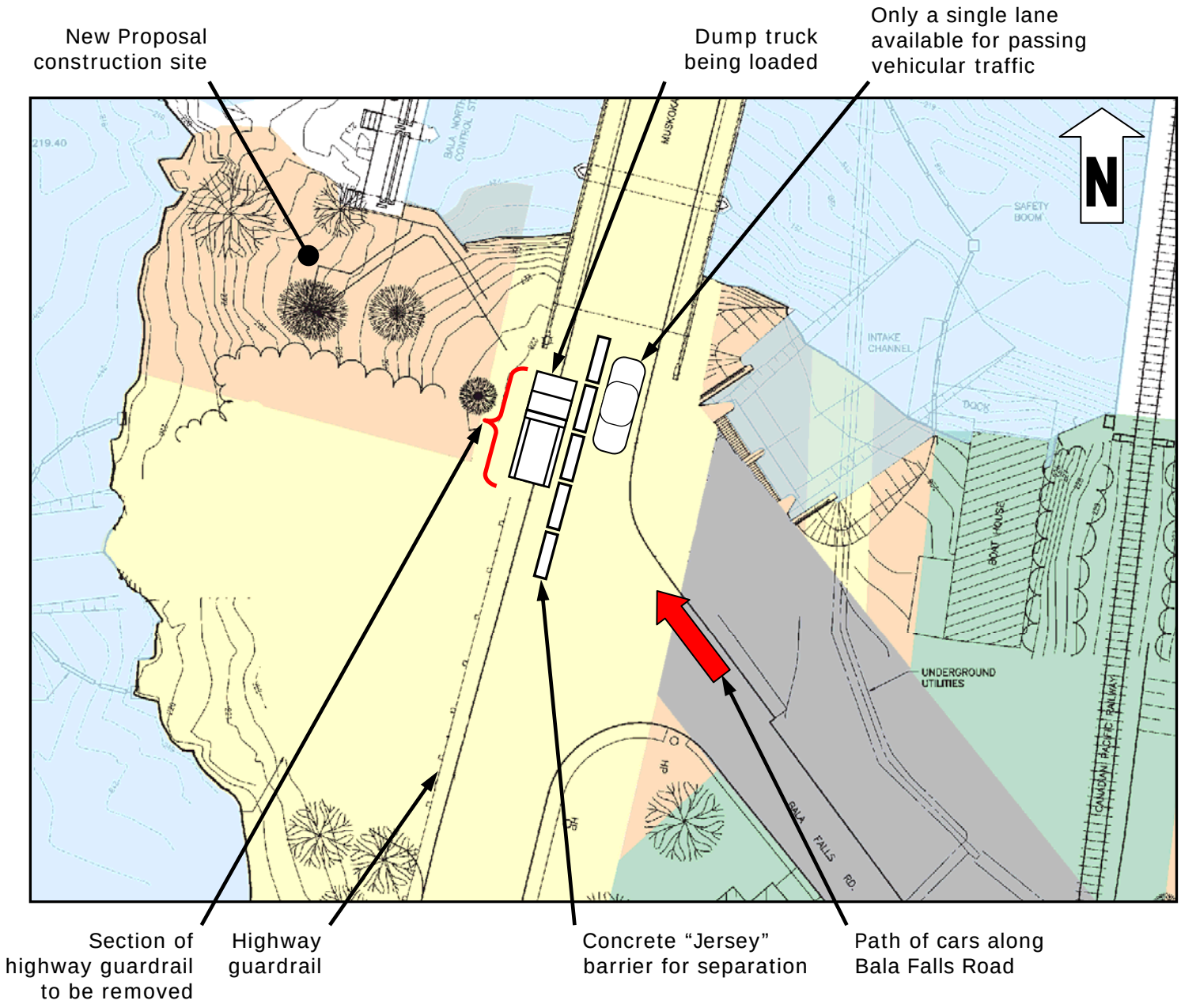
Drawing 6 – From proponent's 2009 Environmental Screening Report, Option 1 would not fit solely on Crown land



Drawing 7 – View westward from District Road 169 at Crown land highway frontage, shows viewing obstruction to looking north created by end of highway bridge railing



Drawing 8 – View from Crown land, showing northward view obstructed by end of highway bridge railing



Drawing 9 – Top view of New Proposal construction site, showing dump truck loading and need for removal of highway guardrail